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10/500,575

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EXAMINER

ROBERTS, JESSICA M

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/500,575

**Applicant(s)**

KADONO ET AL.

**Examiner**

Jessica Roberts

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 07/01/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Information technology –Coding of audio-visual objects—Part 2: Visual ISO/IEC 14496-2 Second Edition 2001-12-01 (herein referenced as 14496).

3. Regarding **claim 18**, 14496 teaches A motion compensation method for generating a predictive image of a current macroblock with reference to a motion vector of a co-located macroblock that is included in a picture different from a current picture in which the current macroblock is included and that is co-located with the current macroblock, said motion compensation method comprising: obtaining a motion vector of a block located in a comer of the co-located macroblock, when a co-located block is composed of a plurality of blocks for which motion compensation has been performed, the co-located block being co-located with a current block included in the current macroblock and being included in the co-located macroblock (7.6.9.5.1 Formation of motion vectors for the direct mode); and performing motion compensation for the current block to generate a predictive image of the current block, by using the obtained motion vector (see section 3.114moiton compensation, and 7.6 Motion compensation decoding).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 19- ~~25~~ are rejected under 35 U.S.C. 103 (a) as being unpatentable over Information technologies –Coding of audio-visual objects—Part 2: Visual ISO/IEC 14496-2 Second Edition 2001-12-01 (herein referenced as 14496) in view of Pen et al., US-2002/0172284A1.

7. Regarding **claim 19**, 14496 teaches the motion compensation method according to claim 18, wherein in said performing of the motion compensation, the predictive image of the current block is generated by setting the motion vector of the current block to "0" (7.6.9.6 Motion compensation in skipped macroblocks), a motion vector of the current block is determined using a motion vector of an adjacent macroblock which is located adjacent to the current macroblock, and the predictive image of the current block is generated by using the determined motion vector (3.114 motion compensation.

14496 discloses motion compensation for both forward and backward macroblocks.

Furthermore, the macroblocks can be representative of either the current macroblock

14496 is silent in regards to the motion vectors having a predetermined range.

However, Peng teaches first scaling system 30 utilizes compare system 34 to compare the magnitude of each macroblock's motion vector to a predetermined threshold value 32 to determine how the macroblock should be processed. If the motion vector for a current macroblock is less than or equal to the predetermined threshold value 32, then the current macroblock is not decoded ([0031]).

8. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of 14496 with the teachings of Peng to provide a system and method for efficiently scaling a motion compensation system within a decoder while maintaining an acceptable level of output quality ([0018]).

9. Regarding **claim 20**, the combination of 14496 and Peng as a whole teaches everything as claimed above, see claim 18. In addition, 14496 teaches the motion compensation method according to claim 18, wherein a size of the current macroblock and the co-located macroblock is 16 pixels x 16 pixels, a size of the current block is 8 pixels x 8 pixels, and a size of each of the plurality of blocks which are included in the co-located macroblock and for which motion compensation has been performed is 4 pixels x 4 pixels ( 7.6.5 Vector decoding processing and motion-compensation in progressive P-and S(GMC)-VOP and table 7- 6 -- 7-9).

10. Regarding **claim 21**, obtaining respective motion vectors corresponding to the plurality of blocks for which motion compensation has been performed, when a co-

located block is composed of the plurality of blocks, the co-located block being co-located within a current block included in the current macroblock and being included in the co-located macroblock (7.6.9.5.1 Formation of motion vectors for the direct mode); and performing motion compensation for the current block to generate a predictive image of the current, by using the obtained motion vectors (see section 3.114 motion compensation, and 7.6 Motion compensation decoding) wherein in said performing motion compensation, the predictive image of the current block is generated by setting the motion vector of the current block to "0" (7.6.9.6 Motion compensation in skipped macroblocks) and a motion vector of the current block is determined using a motion vector of an adjacent macroblock which is located adjacent to the current macroblock, and the predictive image of the current block is generated by using the determined motion vector (3.114 motion compensation, 7.6.5 Vector decoding processing and motion-compensation in progressive P- and S(GMC)-VOP, and 7.6.6 Overlapped motion compensation. 14496 discloses motion compensation for both forward and backward motion macroblocks. Furthermore, these macroblocks can be representative of either the current forward or current backward block with the same macroblock). 14496 is silent in regards to the motion vectors having a predetermined range.

11. However, Peng teaches first scaling system 30 utilizes compare system 34 to compare the magnitude of each macroblock's motion vector to a predetermined threshold value 32 to determine how the macroblock should be processed. If the motion

vector for a current macroblock is less than or equal to the predetermined threshold value 32, then the current macroblock is not decoded ([0031]).

12. Regarding **claim 22**, which recites a corresponding apparatus of the method for motion compensation, thus the analysis and rejection made in claims 18-20 and 26 also apply here because the motion compensation method in claims 18-20 and 26 would necessitate the need for an apparatus capable of providing the limitations of the apparatus in claim 22.

13. Regarding **claim 23**, the analysis and rejection made in claim 18-20 and 26 also apply here. 14496 further teach the use of 14496 means that motion video can be manipulated as a form of computer data and can be stored on various storage means (see introduction). Hence, a computer program for executing the necessary steps corresponding to the method of claim 18-20 and 26 would have been inherent.

14. Regarding **claim 24**, the rejection and analysis for claim 18 also apply.

15. Regarding **claim 26**, the combination of 14496 and Peng teaches everything as claimed above, see claim 18. In addition, 14496 further teaches the motion compensation method according to claim 19, wherein a size of the current macroblock and the co-located macroblocks is 16 pixels X 16 pixels, a size of the current block is 8 pixels X 8 pixels, and a size of each of the plurality of blocks which are included in the co-located macroblock and for which motion compensation has been performed (7.6.5 Vector decoding processing and motion compensation in progressive P and S(GMC)-VOP and table 7-4 -- 7-9).

16. Claim 25 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Information technologies –Coding of audio-visual objects—Part 2: Visual ISO/IEC 14496-2 Second Edition 2001-12-01 (herein referenced as 14496) in view of Chen et al., US-7, 190,724 B2.

17. Regarding **claim 25**, a mobile terminal comprising the integrated circuit according to claim 24 (the applications of ISCVIEC 14496 cover, but are not limited to, such areas as WMM. It is clear to the examiner that since the application of 14496 covers the area of wireless multimedia which is widely used within mobile devices, which would necessitate the use of a mobile terminal. See introduction). However, 14496 does not explicitly disclose a mobile terminal, Chen discloses the access of video on mobile terminals ([0005]).

18. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of 14496 with the teachings of Chen for providing a method and apparatus for implementing efficient memory compression methods ([0003]).

***Examiner's Note***

19. The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole,



including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004)

### ***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

21. Yamaguchi et al., US-2002/0090135 Video coding and video decoding apparatus

22. Yamaguchi et al., US-6, 130, 913 Video coding and video decoding apparatus for enlarging a decoded alpha-map signal in accordance with a reduction ratio setting information signal

23. Boon et al., US-6, 859,559 Image predictive coding method

24. Lainema et al., US- 7, 200,174 Video coding system

25. Demos et al., US-2003/0108102 Macroblock mode decision biasing for video compression systems

26. Okumura et al., US-2001/0004385 Motion vector detection system

27. Francois et al., US-2002/0181591 Process and device for video coding using the MPEG4 standard

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Roberts whose telephone number is (571) 270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jessica M. Roberts/

*Marsha D Banks-Harold*  
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